

EXERTIONAL HEADACHES

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Overview of Presentation

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- Types
- Background/Pathophysiology (Primary & Secondary)
- Diagnostic Criteria
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Definition

- “Headache precipitated by any form of exercise in the absence of any intracranial disorder” (ICHD-3, 2019)
- Previously used terms : ***Primary exertional headache, benign exertional headache***

Types of Exertional Headaches

- Exercise Headaches
 - Primary Exercise Headaches – typically harmless
 - Secondary Exercise Headaches – may require emergency medical attention
- Primary Cough Headache
 - Primary
 - Secondary
- Headache associated with sexual activity
 - Pre-orgasmic
 - Orgasmic

Pathophysiology

- **Primary Exertional Headache:**

- Usually attributed to increased intracranial pressure → Venous/arterial distention → triggers pain-inducing transmitter pathways and headache pathways

- **Secondary Exertional Headache** are usually due to underlying problems such as :

- Subarachnoid Hemorrhage
 - Tumors
 - CSF flow obstruction
 - Sinus infection
 - Head, Neck & Spine structural abnormalities

Diagnostic Criteria

- A. At least 2 headache episodes fulfilling criteria B and C
- B. Brought on by occurring only during and after strenuous physical exercise
- C. Lasting less than 48 hrs
- D. Not better accounted for by another ICHD-3 diagnosis

Symptoms

Primary Exertional Headache	Secondary Exertional Headache
Throbbing pain	Throbbing pain
Occurs after strenuous exercise	Occurs after strenuous exercise
Affects both sides of the head	Affects both sides of the head
Lasts between 5 mins to 48 hrs	Lasts at least one day to more days
	Vomiting
	Loss of consciousness
	Double vision
	Neck rigidity

Risk Factors

- Exercise in hot weather
- Exercise in high altitude
- Insufficient warm up
 - Exercises involved: Weight-lifting, distance running & Aerobic exercises
- Personal Hx or Family Hx of migraines
- Hypoglycemia

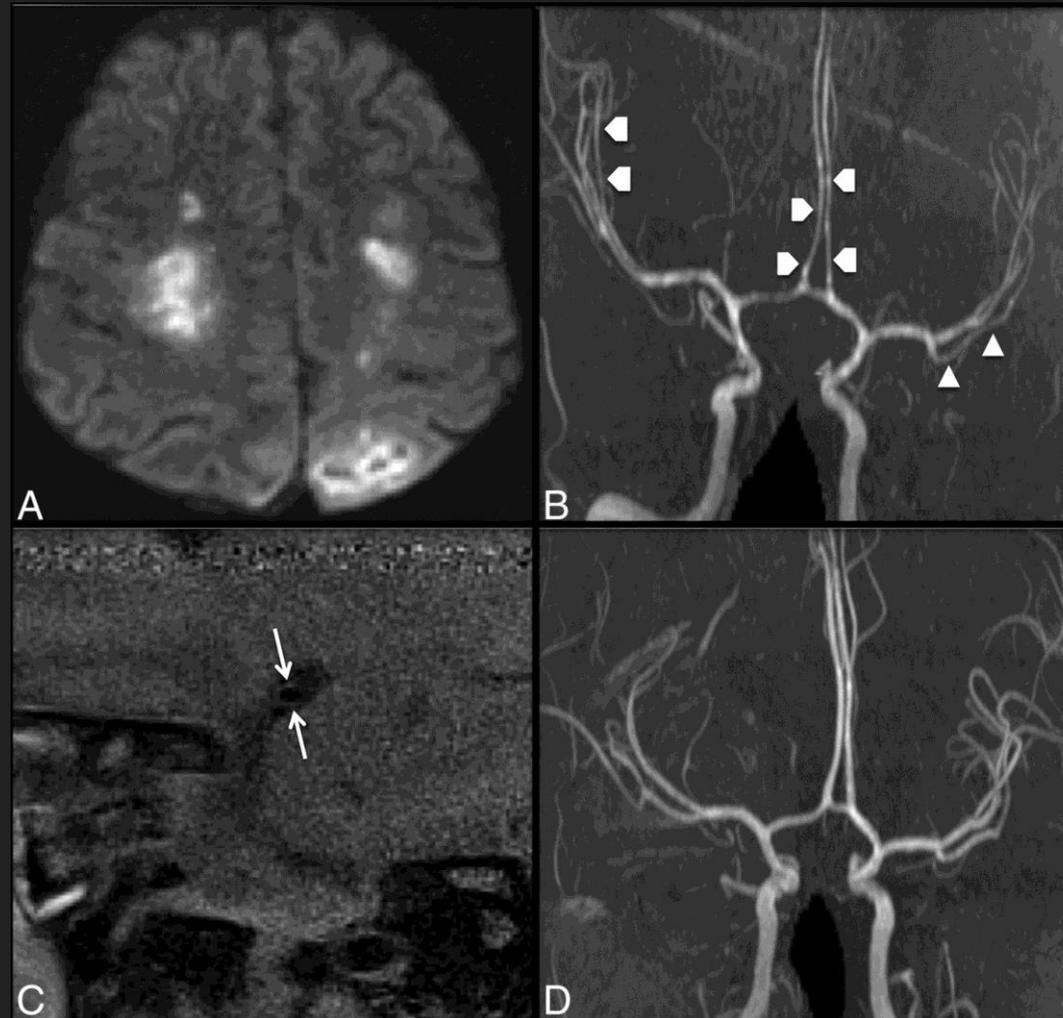
Prevention

- Avoid or limit food triggers including alcohol & caffeine
- Eating 3-6 small well-balanced meals & drinking plenty water
- Proper sleep hygiene
- Proper intensity & duration of warm-up
- Assess medication lists (including medications that induce cough)
- Check Magnesium levels
- Riboflavin & Ubiquinone
- Treat lung infections such as bronchitis
- Get an annual flu shot
- Use stool softeners to avoid constipation

Exclusions/ Diagnostic Procedures

- Rule out:
 - Subarachnoid hemorrhage
 - Arterial Dissection
 - Reversible Cerebral vasoconstriction syndrome:
- Diagnostic Procedures:
 - CT scan
 - MRI scan
 - MR / CT angiography
 - Spinal tap

A 55-year-old woman who presented with severe headache and developed left-sided weakness.



T.R. Miller et al. AJNR Am J Neuroradiol 2015;36:1580-1588

Treatment

- Indomethacin
 - MOA: Direct & Potent cerebral vasoconstrictor (Major advantage)
 - short-term treatment
- Beta-blockers – Propranolol and Nadolol
 - high-frequency headaches
 - NSAIDs contraindications
- Triptans
 - Unable to tolerate Indomethacin
 - Trial & error basis

Conclusions

- Exercise, cough, sex
- Primary vs Secondary
- Proper warm-up, Cough treatment, stool softeners
- CT/MR Angiography
- Magnesium
- Riboflavin
- Indomethacin, Beta-blockers, Triptans

References

- American Migraine Foundation. Primary headache associated with sexual activity (Orgasmic headache). <https://americanmigrainefoundation.org/resource-library/orgasmic-pre-orgasmic-headache/>. Accessed June 26, 2019
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ANY QUESTIONS

